

### Abstract

The present invention relates to a radiometer comprising an IR detector, a lens and a light source. The lens is arranged with respect to the IR detector such that it focuses IR radiation from a measuring surface to the detector. The light source emits visible light for marking the measuring surface. The beam path of the visible light extends through the lens. Moreover, the invention relates to a sighting device for a radiometer for visibly marking a measuring surface the temperature of which is measured by the radiometer. The sighting device comprises a light source for emitting a visible light beam, which marks the measuring surface. A piezoactuator controls the direction of the light beam. As an alternative to the piezoactuator, the light beam may be guided at a constant angular velocity, and a stepwise change of the direction of the light beam may be accomplished by a sectorized mirror. The invention finally relates to corresponding methods. In addition, the invention relates to the adjustment of light sources in a sighting device.